

APPENDIX C

TABLE C BEST MANAGEMENT PRACTICES FOR USE WITH VEGETATION TREATMENT METHODS				
Resource Element	Best Management Practices per Treatment Method			
	Prescribed Fire	Mechanical	Chemical	Biological
Guidance Documents	BLM handbook H-9214-1 Prescribed Fire Management 2000	BLM Manual 1112 (Safety)	BLM Handbooks H-9011-1 H-9015	BLM Manuals 1112, 4100 9014
General	Prepare Fire Management Plan. Use trained personnel with adequate equipment.	Ensure that power cutting tools have approved spark arresters. Wash vehicles & equipment before leaving weed infested areas to avoid infecting weed-free areas. Minimize soil disturbance which may encourage new weeds to develop.	Prepare spill contingency plan in advance of treatment. Select chemical that is least dangerous to environment while providing the desired results. Keep records of each application, including the active ingredient, formulation, application rate, date, time, & application.	Use only biological control agents that have been tested & approved to ensure they are host-specific. Manage the intensity & duration of grazing.
Land Use	Carefully plan fires in wildland-urban interface to avoid loss of property. Notify nearby residents & landowners who could be affected by smoke intrusions or other fire effects.		Consider surrounding land use before aerial spraying. Comply with herbicide-free buffer zones to ensure that no drift will affect adjoining landowners.	
Air Quality See Manual 7000.	Evaluate weather conditions, including wind speed & atmospheric stability, to predict effects of burn & impacts from smoke. Coordinate burn activities with New Mexico Environment Department. Burn when weather conditions are good for rapid smoke dispersion.	Minimize generation of dust & exhaust.	Consider effects of wind, humidity, temperature inversions, & rainfall on herbicide effectiveness & risks.	
Geology, Minerals, Oil & Gas	Maintain safety buffer between burn area & facilities.	Minimize area of surface disturbance.		
Soil	Minimize broadcast burning on highly erodible soils. Re-seed if needed following treatment to encourage revegetation & minimize erosion. Minimize soil heating by pre-treatment of fuels where practical.	Implement erosion control measures where heavy equipment is used. Limit heavy equipment use on slopes greater than 30 percent. Conduct activities on dry or frozen soil to minimize soil compaction. Avoid damage to biological crusts.	Avoid treating areas in which herbicide runoff is likely. Consider soil mobility.	

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Water Resources See Manual 7000 & Memorandum of Understanding with New Mexico Environment Department.	Maintain minimum buffer of 25-50 feet between burn area & water bodies. Minimize burning on hillslopes with high erosion potential & consider revegetation to mitigate. Prevent degradation of groundwater quality whenever practicable, even when WQCC standards allow for further degradation. Develop site-specific BMPs for actions that degrade groundwater quality through nonpoint source pollution, for groundwater with total dissolved solids (TDS) <10,000 mg/l.	Maintain minimum buffer of 25-50 feet between burn area & water bodies. Reseed skid trails & roads closed after operations. Install erosion-control structures on roads used. Prevent degradation of groundwater quality whenever practicable, even when WQCC standards allow for further degradation. Develop site-specific BMPs for actions that degrade groundwater quality through nonpoint source pollution, for groundwater with TDS <10,000 mg/l.	Consider climate, soil type, slope, & vegetation types in determining the risk of herbicide to water resources. Follow label instructions, especially near water bodies. Prevent degradation of groundwater quality whenever practicable, even when WQCC standards allow for further degradation. Develop site-specific BMPs for actions that degrade groundwater quality through nonpoint source pollution, for groundwater with TDS <10,000 mg/l. Evaluate site-specific potential for groundwater contamination with the Environmental Protection Agency rating system DRASTIC.	Avoid using livestock near residential or domestic water sources. Use grazing plans & systems to improve public land health. Prevent degradation of groundwater quality whenever practicable, even when WQCC standards allow for further degradation. Develop site-specific BMPs for actions that degrade groundwater quality through nonpoint source pollution, for groundwater with TDS <10,000 mg/l.
Streams & Wetlands	Maintain minimum buffer of 25-50 feet between burn area & water bodies. Minimize burning on hillslopes with high erosion potential & consider revegetation to mitigate.	Maintain minimum buffer of 25-50 feet between burn area & water bodies.	Apply buffer zones of 100 feet for aerial application, 25 for ground, & 10 feet for hand application. Follow label instructions for control of salt cedar.	Avoid using livestock near residential or domestic water sources.
Vegetation See Handbook H-4410-1, 5000, & 9015.	Conduct burn prescriptions to minimize residual damage to desirable trees. Mitigate soil erosion by constructing erosion control structures on any control lines used.	Minimize disturbance to native vegetation by keeping equipment on existing roads & trails. Reseed skid trails & roads to be closed after operations. Install erosion control structures on roads used.	Avoid damage to non-target plants by using selective herbicides or selective equipment. Reduce drift hazard to non-target species. Minimize the use of broadcast foliar applications to reduce the creation of large areas of browned vegetation.	Use grazing animals at times most likely to damage invasive species. Exclude livestock from revegetated areas for at least two growing seasons.
Fish See Manuals 6500 & 6780.	Maintain a vegetated buffer near fish-bearing streams to minimize soil erosion & soil runoff into streams.	Avoid treatments adjacent to fish-bearing waters. Refuel & service equipment away from water bodies. Maintain vegetated buffer between	Avoid treatments near fish-bearing streams during periods when fish are in life stages most sensitive to the herbicide used. Use appropriate buffer zones based on label instructions & risk.	Limit access of grazing animals to streams & other water bodies to minimize sediments entering water & potential for damage to fish habitat.

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Wildlife See Manuals 6500 & 6780.	Avoid treatments during nesting & other critical periods for birds & other wildlife.	<p>treatment area & water body.</p> <p>Retain wildlife trees & other unique habitat features where practical.</p> <p>Vegetation management strategies should be consistent with historical succession & disturbance regimes.</p> <p>Fuels treatments should consider habitat needs of migratory & non-migratory populations.</p> <p>Avoid treatments during nesting & other critical periods for birds & other wildlife.</p>	<p>Use herbicides of low toxicity to wildlife.</p> <p>Avoid treatments during nesting & other critical periods for birds & other wildlife.</p>	
Threatened & Endangered (T&E) Species See Manual 6840.	<p>Avoid direct impacts to listed species if project may impact listed species, unless studies show that species will benefit from fire.</p> <p>Survey for T& E species & consult with US Fish & Wildlife Service (USFWS) as needed if project may impact listed species.</p> <p>See site-specific conservation measures from Biological Evaluation.</p>	<p>Avoid use of ground disturbing equipment near T&E species.</p> <p>Survey for T&E species & consult with USFWS as needed if project may impact listed species.</p> <p>See site-specific conservation measures from Biological Evaluation.</p>	<p>Survey for T&E species & consult with USFWS as needed if project may impact listed species.</p> <p>See site-specific conservation measures from Biological Evaluation.</p>	
Wild Free-Roaming Horses & Burros	<p>Do not burn extensive, contiguous areas of the Herd Management Area in the same year.</p> <p>Start prescribed fires in such a way as to decrease the likelihood of horses running through fences.</p> <p>Limit burning during the peak foaling period from March 1 through June 30.</p>		Avoid using herbicides in areas actively grazed by wild horses & burros.	

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Livestock See Handbook H-4120-1.	Notify permittees of livestock feeding restrictions in treated areas, if needed. Provide alternative forage sites for livestock, if use areas burn.	Notify permittees of livestock feeding restrictions in treated areas, if needed. Provide alternative forage sites for livestock, if needed.	Notify permittees of livestock feeding restrictions in treated areas, if needed. Provide alternative forage sites for livestock, if needed.	
Cultural Resources & Native American Religious Concerns See NM BLM Protocol with State Historic Preservation Office (SHPO) & Manuals 8100 & 8160.	Evaluate potential impacts of proposed treatment. Conduct cultural resource inventories to identify sites at risk from treatment. Develop avoidance measures & project-specific treatment measures to protect sites by reducing fuel loads in the vicinity of at-risk sites. Consult with SHPO & tribes per NM Statewide Protocol Agreement. Monitor effectiveness of site protection measures (Appendix A.5, Monitoring & Adaptive Management).	Evaluate potential impacts of proposed treatment. Conduct cultural resource inventories to identify sites at risk from treatment. Develop avoidance measures & project-specific treatment measures to protect sites by reducing fuel loads in the vicinity of at-risk sites. Consult with SHPO & tribes per NM Statewide Protocol Agreement. Monitor effectiveness of site protection measures.	Evaluate potential impacts of proposed treatment. If application methods involve ground disturbing activities, conduct cultural resource inventories & implement avoidance measures. Consult with SHPO & tribes per NM Statewide Protocol Agreement. Monitor effectiveness of site protection measures.	Evaluate potential impacts of proposed treatment. If application methods involve ground disturbing activities, conduct cultural resource inventories as appropriate, & implement avoidance measures. Consult with SHPO & tribes per NM Statewide Protocol Agreement. Monitor effectiveness of site protection measures.
Visual Resources See Manual 8400 & H-8410-1.	Minimize or avoid prescribed burning under conditions that could result in smoke impacting PSD Class I areas. Maintain natural vegetated buffer between burn areas & public high use areas. Revegetate treated sites if needed. Use existing roads & minimize fireline construction.	Minimize dust drift, especially near recreational or other public use areas. Minimize earthwork & locate from prominent topographic features. Revegetate treated sites if needed.	Minimize the use of broadcast foliar applications to reduce the creation of large areas of browned vegetation. Minimize herbicide drift.	
Wilderness Areas. See handbooks H-8550-1, H-8560-1, 8351, 8560, plus Specific instructions in Fire Mgt. Unit descriptions & Appendix F of Resource Advisor Guide.	Minimize or avoid soil-disturbing activities during fire suppression or prescribed fire activities. Revegetate sites with native species unless there is no reasonable expectation of natural regeneration.	Use least intrusive methods possible to achieve objectives, & use non-motorized equipment where possible.	Revegetate sites with native species unless there is no reasonable expectation of natural regeneration. Use hand treatments of herbicides only when weeds are spreading within the wilderness or threaten lands outside the wilderness.	Use least intrusive methods possible to achieve objectives, & use non-motorized equipment where possible.

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Recreation See Handbook H-1601-1.	Control public access to potential burn areas.	Control public access until potential treatment hazards no longer exist.	Control public access until potential treatment hazards no longer exist. Post signs noting exclusion areas & duration of exclusion.	
Rights-of-Way	Avoid or minimize prescribed burning under powerlines.			
Health & Safety	Use some form of pre-treatment, such as mechanical or manual treatment, in areas where fire cannot be safely introduced due to hazardous build-up. Always use appropriate safety equipment & Personal Protective Equipment (PPE). Notify nearby residents who could be affected by smoke.	Always use appropriate safety equipment & PPE.	Always use appropriate safety equipment & PPE. Have copy of Material Safety Data Sheets at work site. Follow label instructions & BLM procedures in Handbooks H-9011-1, 1112, & 9015.	Always use appropriate safety equipment & PPE.